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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/783,494

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Alain Yang

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7590

02/22/2007

DUANE MORRIS, LLP

IP DEPARTMENT

30 SOUTH 17TH STREET

PHILADELPHIA, PA 19103-4196

EXAMINER

TADESSE, YEWEBDAR T

ART UNIT

PAPER NUMBER

1734

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/22/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/783,494

Applicant(s)

YANG ET AL.

Examiner

Yewebdar T. Tadesse

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 20-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 20-43 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 recites the limitation "said applying means" in the claim. There is insufficient antecedent basis for this limitation in the claim. For the purpose of examination "said means for applying a layer of bicomponent fibers" is assumed.

Claim 25 recites the limitation "said applying means" in the claim. There is insufficient antecedent basis for this limitation in the claim. For the purpose of examination "said means for applying bicomponent fibers" is assumed.

Claim 29 recites the limitation "said depositing means" in the claim. There is insufficient antecedent basis for this limitation in the claim. For the purpose of examination "said means for depositing bicomponent fibers" is assumed.

Claim 34 recites the limitation "said depositing means" in the claim. There is insufficient antecedent basis for this limitation in the claim. For the purpose of examination "said means for depositing bicomponent fibers" is assumed.

Claim 38, line 10 recites the limitation "said deposition chamber" in the claim. There is insufficient antecedent basis for this limitation in the claim. For the purpose of examination "said bicomponent fiber deposition chamber" is assumed

Claim 41 recites the limitation "said chamber" in the claim, lines 1 and 3. There is insufficient antecedent basis for this limitation in the claim. For the purpose of examination "said bicomponent fiber deposition chamber" is assumed

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 20-25, 29-34, 37-41 and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Young, Sr. et al (US 5,432,000).

As to claims 20 and 29, Young discloses (see Fig 5 and see column 20, lines 32-52) a system for manufacturing composite fibrous product (capable of being insulation product comprising mat or board containing randomly oriented fibers bonded together and portions as claimed) comprising a conveyor (see Fig 5) for conveying a sheet (120) capable of containing randomly oriented fibers bonded together and the sheet is capable of having first and second major surfaces and a pair of side portions; means for applying a layer of bicomponent fibers (see the system applying fiber in Fig 5) to at least one of the major surfaces, each of the bicomponent fibers including first component (synthetic or wood pulp fibers from conduit 114) and second component (treated fibers); and a heater(130) disposed to heat the layer and the sheet, thereby forming a nonwoven layer meltbonded to the at least one of major surfaces (see column 20, lines

32-52). Young further discloses a bicomponent fiber source (hoppers 116 and 110) containing the bicomponent fibers coupled to the chamber (112).

With respect to claims 21 and 30, Young Sr. et al discloses a second component portion capable of having a higher melting point than the first component portion, the heater capable of heating the layer to a temperature at or above the melting temperature of the first component portion, whereby the first component portion of the bicomponent fibers is meltbonded to the randomly oriented fibers in the insulation sheet.

As to claim 22, in Young Sr. et al the sheet is capable of containing fibers as claimed.

As to claims 23 and 31, in Young Sr. et al the first component portion comprising a thermoplastic (see column 9, lines 41-52)

With respect to claims 24 and 32-33, Young Sr. et al's system uses (see columns 9-10, lines 52-67 and 1-19 respectively) the first and second component portion selected from the claimed group (see column 10, lines 2, 6 and 7 for polyethylene, polypropylene and polyesters) and the bicomponent fibers are capable of having the claimed component portions or configurations.

As to claims 25 and 34, Young Sr. et al discloses (see Fig 5) means for applying including a chamber (part of blending unit 112) disposed above the conveying means (see Fig 5) for depositing the bicomponent fibers onto the sheet, the chamber having a side wall, a top wall and an opening at a bottom thereof; and at least one blower (102) for transmitting the bicomponent to the chamber (112).

As to claim 37, in Young the bicomponent fibers are capable of being applied in an amount less than or equal to 2.5 grams/ft<sup>2</sup>.

As to claim 38, Young discloses (see Fig 5 and see column 20, lines 32-52) a system for manufacturing composite fibrous product (capable of being insulation product comprising mat or board containing randomly oriented fibers bonded together and portions as claimed) comprising a conveyor (see Fig 5) for conveying a sheet (120) capable of containing randomly oriented fibers bonded together and the sheet is capable of having first and second major surfaces and a pair of side portions; means for applying a layer of bicomponent fibers (see the system applying fiber in Fig 5) to at least one of the major surfaces, each of the bicomponent fibers including first component (synthetic or wood pulp fibers from conduit 114) and second component (treated fibers); and a heater(130) disposed to heat the layer and the sheet, thereby forming a nonwoven layer meltbonded to the at least one of major surfaces (see column 20, lines 32-52). Young further discloses a bicomponent fiber source (hoppers 116 and 110) containing the bicomponent fibers coupled to the chamber (112) and wherein a second component portion capable of having a higher melting point than the first component portion, the heater capable of heating the layer to a temperature at or above the melting temperature of the first component portion, whereby the first component portion of the bicomponent fibers is meltbonded to the randomly oriented fibers in the insulation sheet.

As to claim 39, in Young Sr. et al the first component portion comprising a thermoplastic (see column 9, lines 41-52)

With respect to claims 40 and 41, Young Sr. et al's system uses (see columns 9-10, lines 52-67 and 1-19 respectively) the first and second component portion selected from the claimed group (see column 10, lines 2, 6 and 7 for polyethylene, polypropylene and polyesters) and the bicomponent fibers are capable of having the claimed component portions or configurations.

As to claim 43, in Young the bicomponent fibers are capable of being applied in an amount less than or equal to 2.5 grams/ft<sup>2</sup>.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 20-25, 27 and 29-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over C. S Francis (US 2,543,101).

As to claim 20-21, 29-30 and 38, Francis discloses (see Fig 1 and column 8, lines 43-75 and 1-25) a system for manufacturing composite fibrous product (capable of being insulation product) comprising a conveyor (belt 3) for conveying a sheet containing randomly oriented fibers bonded together and the sheet having first and second major surfaces and a pair of side portions (see column 4, line 65); means for applying a layer of bicomponent fibers (chamber 9) to at least one of the major surfaces, each of the bicomponent fibers including first component (non-adhesive fibers) and second component (adhesive fibers); and a heater (heating zone with heating cabinet 23) disposed to heat the layer and the sheet, thereby forming a nonwoven (felt-like mass) layer meltbonded to the at least one of major surfaces. Francis further discloses a source of bicomponent fibers (see blowers 15 and 17) coupled to the chamber and wherein a second component portion having a higher melting point than the first component portion, the heater heating the layer to a temperature at or above the melting temperature of the first component portion, whereby the first component portion of the bicomponent fibers is meltbonded to the randomly oriented fibers in the insulation sheet. Francis teaches a second component source (10) containing the second fiber connected to the chamber (9), however Francis lacks showing a first component (non-adhesive fibers) source containing a first component connected to chamber. It is known in the art to connect a source containing one of the bicomponent fibers to the chamber to apply already produced or formed fibers contained in the supplying chamber (10)



Art Unit: 1734

such as shown by Francis. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a bicomponent source containing the first component (non-adhesive fiber, one of the bicomponent fibers) to supply the desired amount of material to the applying chamber.

As to claim 22, in Francis the sheet is capable of containing fibers as claimed (see column 2, lines 27-34).

As to claims 23, 31 and 39, in Francis the first component portion comprising a thermoplastic (see column 3, lines 1-3)

With respect to claims 24, 32-33 and 40-41, Francis's system uses the first and second component portion selected from the claimed group (see column 3, lines 13 and 24-25 for nylon type and polyolefine fibers) and the bicomponent fibers are capable of having the claimed component portions or configurations.

As to claims 25 and 34, Francis discloses (see Fig 1) means for applying including a chamber (9) disposed above the conveying means (belt 3) for depositing the bicomponent fibers onto the sheet, the chamber having a side wall, a top wall and an opening at a bottom thereof; and at least one blower (15, 17) for transmitting the bicomponent to the chamber.

As to claims 27 and 36, Francis discloses the top wall including an air filter (top wall with air screen 180) configured to block the bicomponent fibers from escaping through the top wall.

As to claims 37 and 43, in Francis the bicomponent fibers are capable of being applied in an amount less than or equal to 2.5 grams/ft<sup>2</sup>.

8. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Young, Sr. et al (US 5,432,000) in view of H. W. Collins (US 2,744,045).

Young Sr. et al lacks teaching applying means including a scatter coating system. Collins discloses (see Fig 1) a scatter coating means (17, 24, 45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a scatter coating system in Young Sr. et al as an alternative way of means for applying a layer to evenly distribute the coating component or loosen the clumps of fiber.

9. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Francis (US 2,543,101) in view of H. W. Collins (US 2,744,045).

Francis lacks teaching applying means including a scatter coating system. Collins discloses (see Fig 1) a scatter coating means (17, 24, 45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a scatter coating system in Francis's means for applying a layer (chamber 9 at the opening of the bottom) to evenly distribute the coating component or loosen the clumps of fiber.

***Allowable Subject Matter***

10. Claims 26, 35 and 42 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Francis discloses a chamber including at least one opening on a side thereof coupled to the blower (15,17) through a hose (14,16). However the hoses are not oriented at an upward orientation toward the top wall. None of the prior art cited or reviewed by the examiner alone or in combination teaches or reasonably suggests a system for manufacturing an insulation product comprising, among others, a chamber for applying bicomponent fibers, wherein the chamber includes at least one opening on a side thereof coupled to a blower to a hose, wherein the hose is oriented at an upward orientation toward a top wall of the chamber for applying or depositing bicomponent fibers.

***Response to Arguments***

11. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yewebdar T. Tadesse whose telephone number is (571) 272-1238. The examiner can normally be reached on Monday-Friday 8:00 AM - 4:30 PM.

Art Unit: 1734

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
YTT